

REMARKS

By the foregoing Amendment, Claims 5, 6, 24-26 and 28 have been amended.

Favorable consideration of the application is respectfully requested.

Claims 5-6, 8, 24-26 and 28 were rejected under 35 U.S.C. §103(a) on the grounds of obviousness from Rhoden et al. in view of Murphy. The Examiner acknowledged that Rhoden et al. does not disclose commonly using an identical pixel pattern in first and subsequent accessing of a memory. Murphy was cited as disclosing commonly using an identical pixel pattern in first and subsequent accessing of a memory at column 5, lines 45-60, and in Figs. 3C and 3D. FIG. 3C is an illustration of a graphics board, in which the chip of FIG. 2A shares access to a common frame store with GUI accelerator chip. FIG. 3D is also an illustration of a graphics board, in which the chip of FIG. 2A shares access to a common frame store with a video coprocessor. Neither of these figures illustrates commonly using an identical pixel pattern in first and subsequent accessing of a memory. At column 5, lines 45-60, Murphy discloses commonly scanning primitives in a non-textured rendering system in a horizontal direction, resulting in efficient memory reads, and reading texel data in a conventional sequential, one dimensional manner for textured operations. It is possible that such a sequential, one dimensional, horizontal pattern would correspond to the 16 x 1 interleaving pattern of the invention described at page 34, lines 11-14, for example, and illustrated in Figs. 18 and 21. However, this 16 x 1 interleaving pattern is one of several which may be appropriate for a desired primitive, and the system and method of the invention selects an optimal pattern to reduce memory

access operations to a minimum. Claim 5 has been amended to recite "said control circuit selecting the shape of the optimal pixel pattern for the storage of the pixel data of the desired primitive from a plurality of predetermined pixel patterns such that the accessing unit stores the pixel data into the memory with the minimum number of times of accessing the memory." Claim 25 similarly has been amended to recite "selecting a shape of an optimal pixel pattern from a plurality of predetermined pixel patterns according to the coordinate data generated by the processor for storage of the pixel data of the desired primitive," and wherein "selecting a shape comprises specifying the shape such that the accessing unit stores the pixel data into the memory with the minimum number of times of accessing the memory." It is respectfully submitted that Murphy does not teach, disclose or suggest selecting a shape of an optimal pixel pattern from a plurality of predetermined pixel patterns according to coordinate data generated by a processor for storage of the pixel data of the desired primitive to reduce memory access operations to a minimum, as is claimed.

The Examiner indicated that Rhoden et al. disclosed selecting a pixel pattern from a plurality of pixel patterns each having a different shape with the same number of pixel patterns, at column 6, lines 5-20. At column 6, lines 5-20, Rhoden et al. discloses accessing a frame buffer with non-rectangular tile patterns of pixels that are dynamically modified to provide a "best fit" group of pixels generated by a graphics renderer to a graphics primitive. However, Rhoden et al. does not teach, disclose or suggest selecting a shape of an optimal pixel pattern from a plurality of predetermined pixel patterns

according to coordinate data generated by a processor for storage of the pixel data of the desired primitive to reduce memory access operations to a minimum, as is claimed.


It is respectfully submitted that the claims are novel and inventive over Rhoden et al. and Murphy, taken individually or in combination, and that the rejection of Claims 5-6, 8, 24-26 and 28 on the grounds of obviousness from Rhoden et al. in view of Murphy should be withdrawn.

Claims 7 and 27 were rejected under 35 U.S.C. 103(a) on the grounds of obviousness from Rhoden et al. in view of Murphy, and further in view of May, which was cited as disclosing calculation of an aspect ratio of a desired primitive, and specifying a shape of an optimal pixel pattern according to the aspect ratio, at column 3, lines 42-49. This portion of May that transfers of text data may be performed optimally with long, narrow tiles sized to cover a line or portion of a line of text, and that graphical images and video generally may be optimized using taller rectangular or square tile shapes. However, May does not teach, disclose or suggest selection of a shape of an optimal pixel pattern from a plurality of predetermined pixel patterns according to coordinate data generated by a processor for storage of the pixel data of a specific, desired primitive to reduce memory access operations to a minimum, as is claimed. It is therefore respectfully submitted that Claim 7 and 27 are novel and inventive over Rhoden et al., Murphy and May, taken individually or in combination, and that the rejection of Claims 7 and 27 on the grounds of obviousness from Rhoden et al. in view of Murphy, and further in view of May should be withdrawn.

In light of the foregoing amendments and remarks, it is respectfully submitted that the application should now be in condition for allowance, and an early favorable action in this regard is respectfully requested.

Respectfully submitted,

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